इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS 8096 (1992): Specification for fire beaters [CED 22: Fire Fighting]

“ज्ञान से एक नये भारत का निर्माण”
Satyanarayan Gangaram Pitroda
“Invent a New India Using Knowledge”

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE

BRUTUM FULMEN
IGNORANTIA JURIS NON EXCUSAT
PROTECTED BY COPYRIGHT

IS 8096 : 1992
(Reaffirmed 2002)

भारतीय मानक

फायर बीटर – विशिष्टि

(पहला पुनरीक्षण)

Indian Standard

FIRE BEATERS — SPECIFICATION

(*First Revision*)

UDC 614·843

© BIS 1992

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

August 1992

Price Group 3

Fire Fighting Sectional Committee, CED 22

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Fire Fighting Sectional Committee had been approved by the Civil Engineering Division Council.

Fire beaters are often used for putting off small fires such as wild grass, shrubs, dry vegetation, hay, plastics, coal which can be easily put out by beating and smoothering. This piece of equipment finds much application in rural areas and in those places where there is a scarcity of water.

A fire beater should be made as light as possible yet its constructions should be sturdy and made out of non-combustible materials.

This standard was first published in 1976. At that time, it was formulated on the basis of light fire beaters used by the Ministry of Defence. This present revision has been taken up in order to modify the standard, in view of the R & D work done and experience gained by DIFR. This revision aims to further reduce the overall weight and the cumbersome procedure of the design without sacrificing the effectiveness and shelf life. In this specification an acceptance test of fire beaters has also been incorporated.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

FIRE BEATERS — SPECIFICATION

(First Revision)

1 SCOPE

1.1 This standard covers the requirements of fire beaters used for fighting out small fires in respect of material, design, fire retardant treatment, termite resistant treatment, mass acceptance test and markings.

2 REFERENCES

2.1 The Indian Standards listed in Annex A are necessary adjuncts to this standard.

3 MATERIAL

3.1 Steel Wire Fabric

Steel wire fabric for blade shall conform to IS 4948 : 1974.

3.2 Expanded Steel

Expanded steel used for blade shall conform to IS 412 : 1975.

3.3 Fire Retardant Treated or Fire Resistant Canvas

Canvas used shall be fire retardant treated to make them fire resistant.

3.4 Mild Steel Round

Mild steel round for frame shall conform to IS 1732 : 1971.

3.5 Mild Steel Sheet

Mild steel sheet for shank shall conform to IS 1079 : 1988.

3.6 Spring Steel Wire

Spring steel wire shall conform to IS 4454 (Part 1) : 1981

4 COMPONENTS

4.1 Handle

4.1.1 The handle shall be made of solid bamboo having 1 800 mm length and 30 ± 5 mm diameter or of some alternative material of heat insulative properties provided it meets the requirement of specified weight (*see* **7.2.2**). The handle shall be finished smooth.

4.1.2 The handle before fitting into the socket made in shank shall be liberally swabbed with termite resistant composition comprising 10 percent solution of acid-chromate composition in water. It will then be allowed to dry for at least 24 hours.

The free end of the bamboo handle shall be protected ftom disintegrating by fitting with a hollow close ended cap made of chrome plated Mild steel or aluminium. The protective cap shall have knurlings made on its outer surface to enhance grip. Incidentally this provision also helps to counter the weight of the blade of the fire beater to some extent while operating and helps to make fire beating easy. At least 5 mm of the round edges of this knurled protective cap shall be chamfered all round at 45 degree to reduce sharpness as shown in Fig. 4.

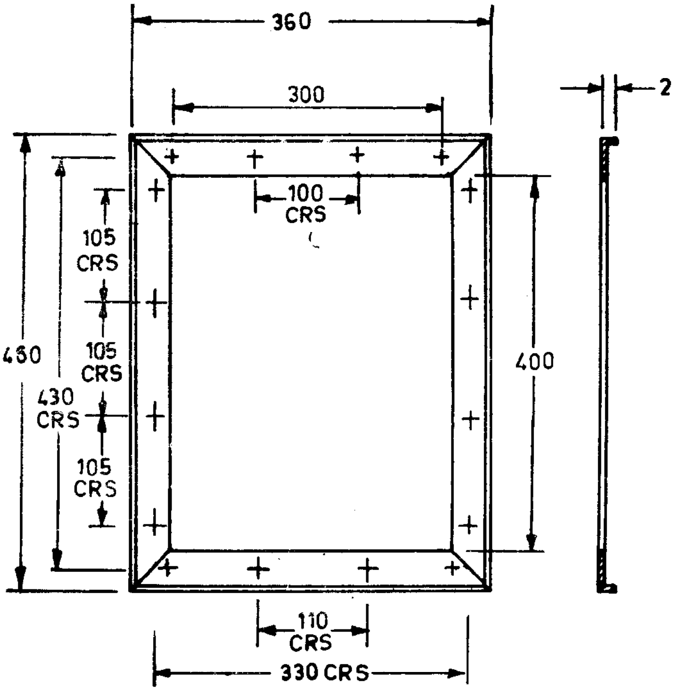
4.2 Blade

The blade of the fire beater shall consist of a rectangular piece of expanded mild steel or steel or steel wire mesh measuring 452 mm × 352 mm, covered fully on both sides with stretched fire resistant canvas olive green in colour placed between two frames and securely fixed in position with hexagonal nut-bolts using spring washers all round the frame as shown in Fig. 1 and 2.

The two pieces frame shall be made of 1 mm thick mild steel. The width of frame shall be 30 mm. The shank portion of the blade shall also be in two pieces made of 1 mm thick spring steel. The frame shall be welded at diagonals as per IS 819 : 1957 as shown in Fig. 1 and 2.

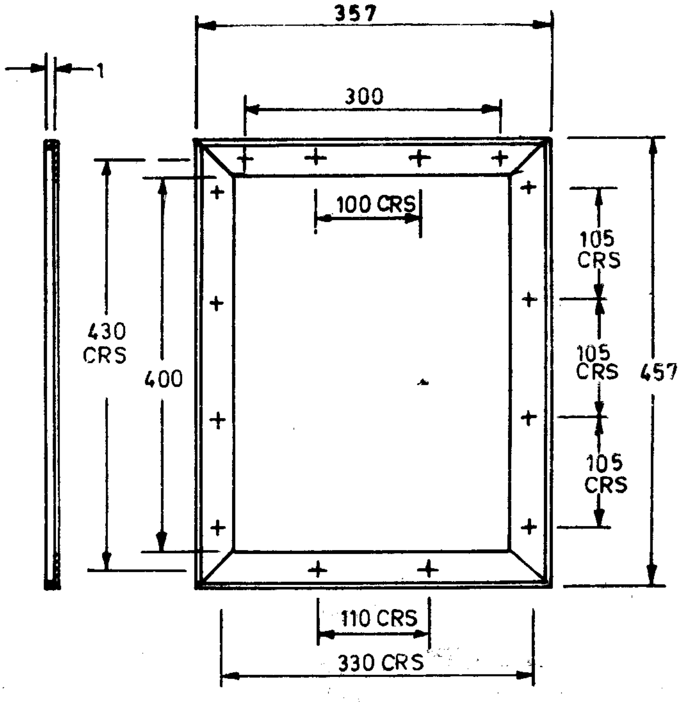
5 ASSEMBLING

5.1 The blade so made shall be fixed with bamboo handle through a two piece shank. The dimension and design of the shank is given in Fig. 3. The socket part of the shank shall be tightly screwed to the bamboo handle by two bolts, nuts and spring washers as shown in Fig. 3. The complete shape of the fire beater has been shown in Fig. 5. The



All dimensions in millimetres.

FIG. 1 SEAT PRESSING



All dimensions in millimetres.

FIG. 2 COVER PRESSING

shank shall be tack welded to the frame. Tack welding may be done at mid points of the three sides of the frame to avoid split at the edges of the frame. The fire resistant or retardant coated canvas cloth shall be tightly fitted.

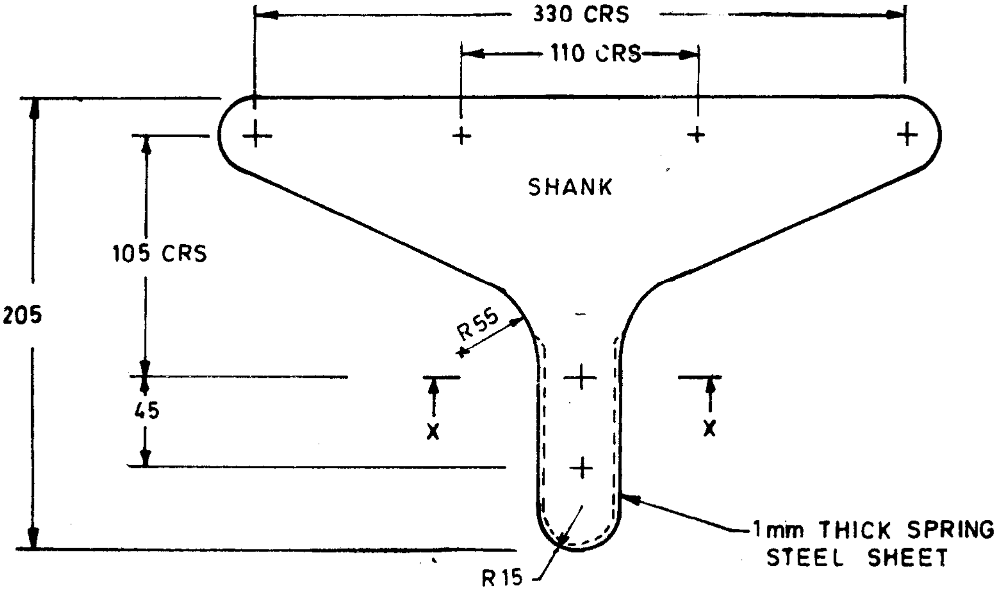
6 WORKMANSHIP

6.1 All the metal surfaces edges, corners of frame, shank and socket and knurled cap if casted shall be free from casting defects, such as burrs, sharp edges, dents, cracks and other surface defects. The welding shall be neat continuous, sound and free from porosity.

7 GENERAL REQUIREMENTS

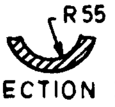
7.1 Length

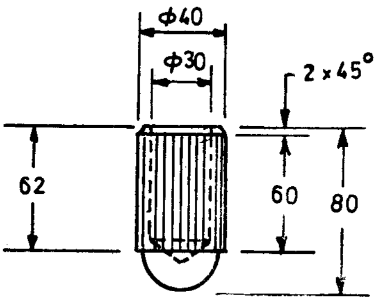
The overall length of the fire beater shall be 2 300 ± 30 mm.



All dimensions in millimetres.

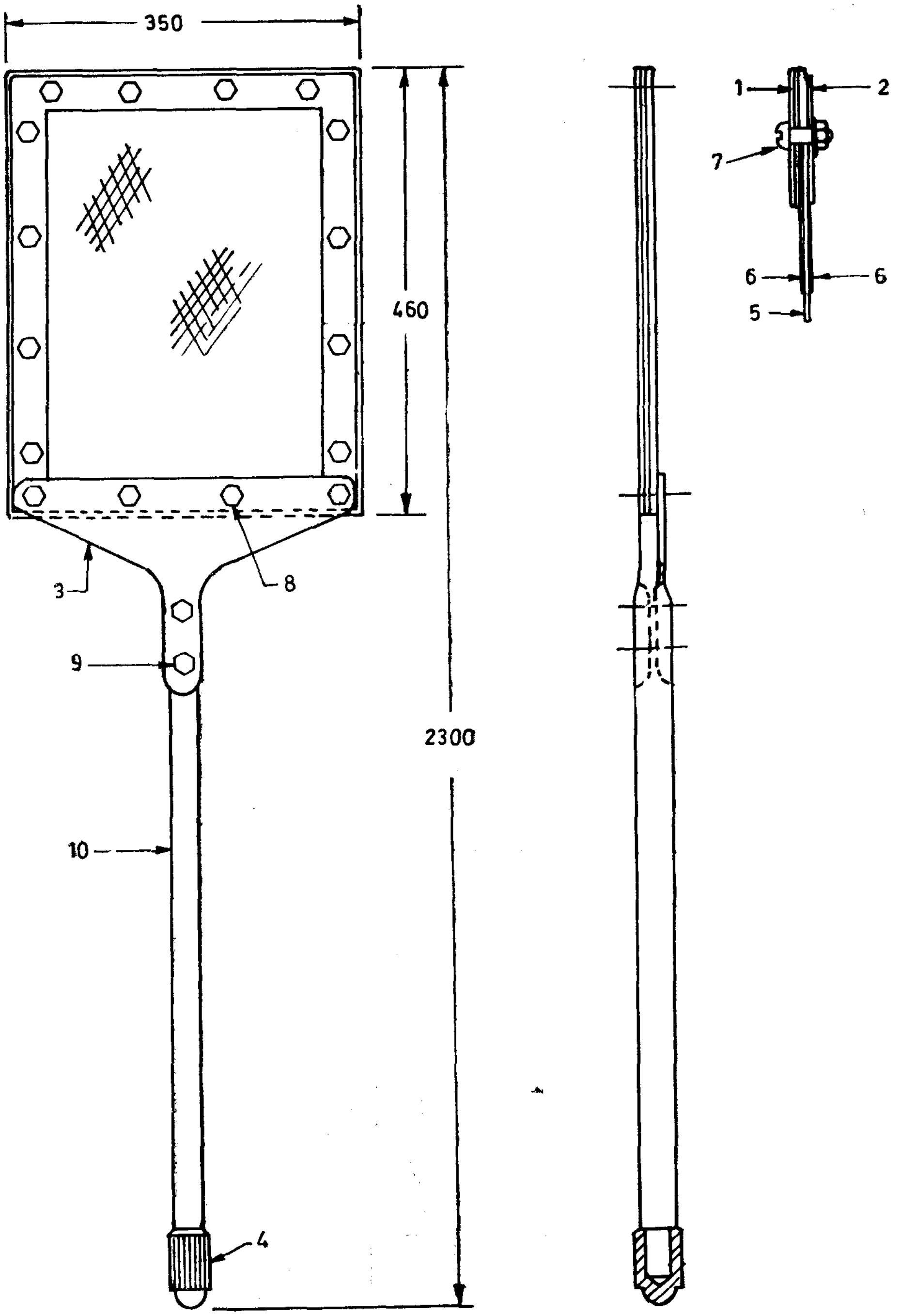
FIG. 3 HOLDER PRESSING (SHANK)





All dimensions in millimetres.

FIG. 4 HANDLE CAP (KNURLED)



Ref No.	*Description*	*No. Off*	*Material*	*Remarks*
1.	Seat pressing	1	Mild steel	
2.	Cover pressing	1	Mild steel	
3.	Holder pressing (shank)	2	Spring steel	
4.	Handle cap	1	Mild steel	
5.	Expanded metal 352×452	1	Mild steel	
6.	Super fine canvas 352×452	2	Canvas	
7.	Round HD. screw M5×16 mm with nut and Washer	14	Stainless steel	With spring washer and nut
8.	HEX. HD screw M6×16 mm	2	Stainless steel	-do-
9.	HEX. HD screw M6×40 mm	2	Stainless steel	-do-
10.	Bamboo handle 32/35 dia×1 850	1		

All dimensions in millimetres.

FIG. 5 A TYPICAL FIRE BEATER

7.2 Mass

7.2.1 The overall mass of the fire beater shall not exceed 3·25 kg.

7.2.2 The mass of the handle including knurled protective cap shall not exceed 1·525 kg.

7.2.3 The mass of the finished blade of the fire beater with shank piece in duly bolted condition shall not exceed 1·725 kg.

7.3 Painting

All the metal surfaces, both exposed hidden, including those of the frame, shank and socket shall be coated with 1 mm thick layer of rust resistant lead oxide primer.

8 TESTING

8.1 The samples shall be tested as per the procedure given in **8.2**.

8.2 The sample fire beater shall be held by one hand at a point nearly in the middle of length of handle (that is, the point of its balance) and by the other hand on the protective cap. The beater shall be lifted to a level 30 cm above the head of the operator and then allowed to fall freely under the action of gravity, on to a plane surface of concrete, in such a manner that the angle between the line of shank and plane of blade shall be not more than 30°. The sample shall be subjected to 120 continuous beatings, with 60 beatings from either side.

8.3 The sample shall be considered as having passed the test if no cracks develop or no mechanical failure in the material of frame, shank, and joint of socket and shank occurs. Also, no joint or fixing nut shall open up.

9 MARKING

9.1 Each fire beater shall be legibly and indelibly stamped on the metallic portion of the handle with the manufacturer's name or initials or recognized trade-mark and the year of manufacture.

9.2 Each fire beater may also be marked with the Standard Mark.

ANNEX A

(*Clause* 2.1)

LIST OF REFERRED INDIAN STANDARDS

IS No.	*Title*
412 : 1975	Expanded metal steel sheets for general purposes (*second revision*)
819 : 1957	Code of practice for resistance spot welding for light assemblies in mild steel
1079 : 1988	Hot rolled carbon steel sheet and strip (*fourth revision*)
1732 : 1971	Dimensions for round and square steel bars for structural and general engineering purposes (*first revision*)
4454 (Part 1) : 1981	Steel wires for cold formed springs: Part 1 Patented and cold drawn steel wires-unalloyed (*second revision*)
4948 : 1978	Specification for welded steel wire fabric for general use (*first revision*)

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designation. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Revision of Indian Standards

Indian Standards are reviewed periodically and revised, when necessary and amendments, if any, are issued from time to time. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition. Comments on this Indian Standard may be sent to BIS giving the following reference:

Doc : No CED 22 (4611)

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksanstha
(Common to all Offices)

Regional Offices :		Telephone
Central :	Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	331 01 31 331 13 75
Eastern :	1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola CALCUTTA 700054	37 84 99, 37 85 61, 37 86 26, 37 86 62
Northern :	SCO 445-446, Sector 35-C, CHANDIGARH 160036	53 38 43, 53 16 40, 53 23 84
Southern :	C. I. T. Campus, IV Cross Road, MADRAS 600113	235 02 16, 235 04 42, 235 15 19, 235 23 15
Western :	Manakalaya, E9 MIDC, Marol, Andheri (East) BOMBAY 400093	632 92 95, 632 78 58, 632 78 91, 632 78 92

Branches : AHMADABAD, BANGALORE, BHOPAL, BHUBANESHWAR, COIMBATORE, FARIDABAD, GHAZIABAD, GUWAHATI, HYDERABAD, JAIPUR, KANPUR, LUCKNOW, PATNA, THIRUVANANTHAPURAM.

Printed at Printwell Printers, Aligarh, India